

**REMARKS**

**Summary Of The Office Action & Formalities**

By this Amendment, Applicant is amending claims 1-5, and 7-9, and adding new claims 10-14. No new matter is added.

Applicant thanks the Examiner for acknowledging the claim to foreign priority and for confirming that the certified copy of the priority document was received.

Applicant also thanks the Examiner for initialing the references listed on form PTO/SB/08 submitted with the Information Disclosure Statement filed on June 28, 2004.

Again, Applicant thanks the Examiner for acknowledging and accepting the drawings submitted on December 31, 2003.

Claims 2 and 3 are rejected under 35 U.S.C. § 112, second paragraph, for the reason set forth at pages 2 and 3 of the Office Action. Applicant is amending the claims to overcome this rejection.

The prior art rejections are summarized as follows:

1. Claims 1 and 7 are rejected under 35 U.S.C. § 102(b) as being anticipated by Chandross et al. (US 5,773,486).
2. Claims 4-6 and 8 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Chandross et al. (US 5,773,486).

Claims 2, 3 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicant respectfully traverses.

**Claim Rejections - 35 U.S.C. § 102**

*1. Claims 1 And 7 In View Of Chandross et al. (US 5,773,486).*

In rejecting claims 1 and 7 in view of Chandross et al. (US 5,773,486), the grounds of rejection state:

Chandross et al. describes an optical fiber with a Bragg grating having a core (13) surrounded by a cladding (12) and a coating (11) made of a material containing an organic substance (Column 4 Lines 30-55) that is substantially transparent to UV radiation used to write the grating and an inorganic materials (see Example 13 at Column 9) that is not miscible with the organic substance and is distributed substantially uniformly in the material. Chandross et al. further describes preparing a settable mixture containing the inorganic substance and at least one polymer precursor, applying the settable mixture on the cladding as a single layer and causing the settable mixture to set and form the material (see Column 4 Lines 5-55).

Office Action at page 3.

Applicant respectfully submits that Chandross et al. does not disclose, teach or suggest all elements of the claims and therefore does not anticipate, nor render the present invention obvious. Specifically, independent claims 1 and 7 recite that the coating material comprises an organic substance and an inorganic substance that is not miscible with the organic substance and that is distributed in a substantially uniform manner in the coating material.

Chandross et al., on the other hand, does not disclose, teach or suggest an inorganic substance in the coating material. The Examiner refers to Example 13 of the reference which discloses a coating material made from a mixture of methyl butyl ketone and 3-mercaptopropyl trimethoxysilane, both of which are organic substances as evidenced by the references attached as Attachment A showing the molecular formulas of these substances. As disclosed in the reference, thiols such as 3-mercaptopropyl trimethoxysilane are used by Chandross et al. as

synergist to improve curing efficiency. See e.g., col. 4, lines 56-64 and Example 3 at column 7, lines 17-20. Therefore, for at least this reason Chandross et al. does not disclose all elements of the present claims.

Accordingly, Applicant respectfully requests withdrawal of the anticipation rejection under 35 U.S.C. § 102.

**Claim Rejections - 35 U.S.C. § 103**

*1. Claims 4-6 And 8 Over Chandross et al. (US 5,773,486).*

In rejecting claims 4-6 and 8 over Chandross et al. (US 5,773,486), the grounds of rejection state:

Chandross et al. is silent as to the by-weight make-up of the material. However, it would have been obvious to one of ordinary skill in the art at the time of invention to use such a combination, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Chandross et al. is silent as to the contrast of the grating. However, it would have been obvious to one of ordinary skill in the art at the time of invention to use such contrasts, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Chandross et al. does not specifically describe an optical device incorporating the fiber with a Bragg grating. However, the fiber is useless without such a device. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to use the fiber in a device to provide a utility for the fiber.

Office Action at pages 4-5.

Applicant respectfully submits that Chandross et al. does not disclose, teach or suggest all elements of independent claims 1 and 7 for the reasons set forth above. Claims 4-6 depend

from independent claim 1 and claim 8 depends from independent claim 7 and therefore these claims are distinguished over Chandross et al. for at least the same reasons as claims 1 and 7.

Accordingly, Applicant respectfully requests withdrawal of the obviousness rejection under 35 U.S.C. § 103.

**Claim Objections**

Claims 2, 3 and 9 are objected to as being dependent on a rejected base claim, but are indicated as being allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claim.

Applicant has rewritten claim 9 to be in independent form and, therefore, allowable. Applicant submits that claims 2 and 3 are allowable as presently written as dependent claims for at least the same reasons as claims 1 and 7 from which they depend as discussed above.

Accordingly, Applicant respectfully requests withdrawal of the objection to the claims.

**New Claims**

For additional claim coverage merited by the scope of the invention, Applicant is adding new claims 10-14 which depend directly or indirectly from claim 1 or 7 and are distinguished over the art of record for at least the same reasons.

**Conclusion**

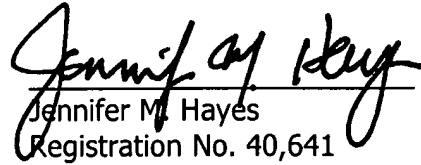
In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

**Amendment Under 37 C.F.R. § 1.111**  
U.S. Application No. 10/748,282

Attorney Docket No.: Q79002

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

  
Jennifer M. Hayes  
Registration No. 40,641

SUGHRUE MION, PLLC  
Telephone: (202) 293-7060  
Facsimile: (202) 293-7860

WASHINGTON OFFICE

**23373**

CUSTOMER NUMBER

Date: June 6, 2006

## Attachment A

# 2-HEXANONE

### PRODUCT IDENTIFICATION

CAS NO.	591-78-6
EINECS NO.	209-731-1
FORMULA	$C_6H_{12}O$
MOL WT.	100.16
H.S. CODE	2914.19
TOXICITY	Oral rat LD50: 2590 mg/kg
SYNONYMS	Methyl butyl ketone; methyl n-butyl ketone; MNBK; Butyl methyl ketone; Hexan-2-one; MBK; n-butyl methyl ketone; Propylacetone;



### DERIVATION

### CLASSIFICATION

### PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	clear liquid
MELTING POINT	-57 C
BOILING POINT	126 - 128 C
SPECIFIC GRAVITY	0.81 - 0.82
SOLUBILITY IN WATER	14 (g/l)
pH	
VAPOR DENSITY	
AUTOIGNITION	423 C
NFPA RATINGS	Health: 2 Flammability: 3 Reactivity: 0
REFRACTIVE INDEX	
FLASH POINT	23 C
STABILITY	Stable under ordinary conditions.

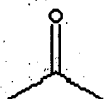
### GENERAL DESCRIPTION & APPLICATIONS

Ketone is a class of chemical compounds contain the carbonyl group in which the carbon atom is covalently bonded to an oxygen atom.

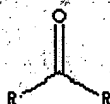
Carbonyl groups are:

- Aldehydes (X and Y = H; X = H, Y = alkyl or aryl)
- Ketones (X and Y = alkyl or aryl)
- Carboxylic acids (X = OH, Y = H, alkyl, or aryl)
- Esters (X = O-alkyl or aryl; Y = H, alkyl, or aryl)
- Amides (X = NH, N-alkyl, or N-aryl; Y = H, alkyl, or aryl)
- Acid halides
- Acid anhydrides
- Lactones

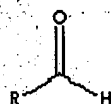
- Lactams



Carbonyl Group



Ketones

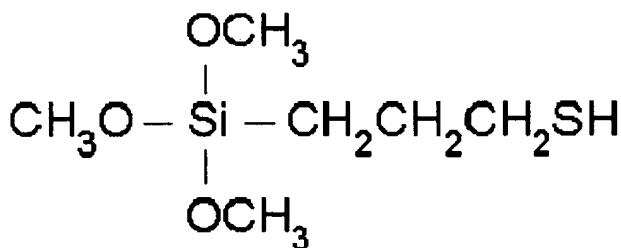


Aldehydes

Ketone has the general formula  $RCOR'$  where the groups  $R$  and  $R'$  may be the same or different, or incorporated into a ring ( $R$  and  $R'$  are alkyl, aryl, or heterocyclic radicals). The simplest example,  $R$  and  $R'$  are methyl group, is acetone (also called 2-propanone,  $CH_3COCH_3$ ) which is one of the most important ketones used in industry (low molecular weight ketones are general purpose solvents.) In the IUPAC system, the suffix -one is used to describe ketone with the numbering of the carbon atom at the end that gives the lower number. For example,  $CH_3CH_2COCH_2CH_2CH_3$  is named 3-hexanone because the whole chain contains six carbon atoms and the oxygen is connected to the third carbon from the lower number. There are aromatic ketones of which acetophenone and benzophenone are examples. Ketones can be made by the oxidation of secondary alcohols and the destructive distillation of certain salts of organic acids. In addition to as polar solvents, ketones are important intermediates in the syntheses of organic compounds such as alkoxides, hydroxyalkynes, imines, alcohols (primary, secondary as well as tertiary), acetals, thioacetals, phosphine oxides, geminal diols, hydrazones, organic sulfite and cyanohydrins. 2-Hexanone is used as a solvent and an intermediate in the synthesis of pharmaceuticals and pesticides.

Name ? (3-mercaptopropyl)trimethoxysilane

Chemical  
Drawing ?



Physical	
Density	1.05
Refractive index	1.441 - 1.443
Boiling Point (°C)	215
Flash Point (°C)	88
Molecular Formula	$C_6H_{16}O_3S$ Si
Molecular weight	196.33674